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EXAMINER

EGAN, BRIAN P

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,371

Applicant(s)

ONOZAWA ET AL.

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,8-12,16,19,20,24,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,8-12,16,19,20,24,27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention.

The phrase "Charpy impact strength" is indefinite. "Charpy" is in reference to a specific testing method and given little to no patentable weight. The Examiner suggests deleting the term "Charpy" to facilitate clarity. Proper clarification and/or correction are required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11-309813 in view of Kawasaki et al. (#5,393,607).

JP '813 teaches a hard coat film comprising a silicone-based hard coat layer provided on one side of a multi-layered base composed of a plurality of different laminated resin films (note that all film layers adjacent the hard coat layer are considered as part of a base structure) (pgs. 2-7, paragraphs [0003-0010]). The base comprises a weather-resistant resin film (p.2, paragraph [0003]), thereby inherently impact resistant, wherein the base film comprises films made from

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materials such as PET, PC, acrylic resins, polyester system resins, polyurethane resins, and butyral resins (p. 3, paragraph [0005] and p. 5, paragraph [0008]). The hard coat layer is provided on the weather-resistant resin film wherein the weather-resistant resin film comprises an ultraviolet absorber (p. 3, paragraph [0005]). A release sheet is provided via an adhesive layer on a side made of the multi-layered base opposite to a side provided with the silicone-based hard coat layer (pgs. 6-7, paragraph [0010]). The hard coat film is stuck on external surfaces of window panes and plastic boards for windows (pgs. 6-7, paragraph [0010]). Note, however, that the claimed limitation, "the hard coat film used for being stuck on the external surfaces...", is merely an intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Marsham*, 2 USPQ 2d 1647 (1987).

JP '813 fails, however, to teach multiple layers of the same resin being used in the hard coat film substrate. JP '813 also fails to teach the use of a second resinous layer with a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. "optional" language is used) and therefore given no patentable weight. Prior art need not teach the "optional" second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a).

Kawasaki et al., however, teach the use of a multilayered film comprising two layers of polymethyl methacrylate (Col. 4, lines 43-45 and Col. 39, lines 1-4) and a high hardness transparent resin layer (Col. 5, lines 7-10). The film exhibits an impact resistance of greater than 7 kg cm/cm² (Col. 3, lines 53-56). Kawasaki et al. teach the use of the aforementioned resinous

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structure for the purpose of providing a starting material for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two film types together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability (see Columns 1-3). Thus, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have substituted the base layer of a hard coat laminate substrate with a multilayered resinous film comprising two layers of the same PMM resin and one layer of a second resin for the purpose of providing a base material for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two film types together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability as taught by Kawasaki et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified JP '813 by replacing the base film with the multilayered film as taught by Kawasaki et al. in order to provide a starting material for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two adhesives together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability.

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4. Claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11-309813 in view of Welhart et al. (#3,810,815).

JP '813 teaches a hard coat laminate substrate as detailed above. JP '813 fails, however, to teach multiple layers of the same resin being used in the hard coat film substrate. JP '813 also fails to teach the use of a second resinous layer with a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. "optional" language is used) and therefore given no patentable weight. Prior art need not teach the "optional" second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a).

Welhart et al., however, teach the use of a multilayered transparent laminate comprising a polycarbonate resin film layer surrounded by two layers of polymethyl methacrylate resin (Col. 3, lines 17-20). Welhart et al. teach that the polycarbonate layer thickness is modified to withstand the forces applied to the desired end product and explicitly teach that the polycarbonate withstands pressures of greater than 8 psi (Col. 6, lines 40-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it withstands the pressures applied to the desired end product. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it exhibits an impact strength within the Applicant's claimed range (i.e., greater than 10 kg cm/cm²) since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Welhart et al. teach the use of the multilayered film for the purpose of replacing the use of either a single polycarbonate film layer

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or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance (see Columns 1-2). Thus, it would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a single-layered base layer structure of either polycarbonate or polymethyl methacrylate with a multilayered structure comprising two layers of PMM and an intermediate layer of polycarbonate for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance as taught by Welhart et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified JP '813 by replacing the single layered base with a multilayered film of PMM and polycarbonate as taught by Welhart et al. in order to replace the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance.

5. Claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al. (#6,391,400) in view of Kawasaki et al. (#5,393,607).

Russell et al. teach a hard coat film comprising a silicone-based hard coat layer (Col. 36, lines 16-26) provided on one side of a multi-layered base composed of a plurality of resin films (see Figs. 3(c and e), denoted "S"). The hard coat layer is provided on the weather-resistant resin film wherein the weather-resistant resin film comprises an ultraviolet absorber (Col. 18, lines 18-

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23). A release sheet is provided via an adhesive layer on a side made of the multi-layered base opposite to a side provided with the silicone-based hard coat layer (Col. 28, lines 62-66). The hard coat film is stuck on external surfaces of window panes and plastic boards for windows (Col. 34, lines 62-66). Note, however, that the claimed limitation, “the hard coat film used for being stuck on the external surfaces...,” is merely an intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Marsham*, 2 USPQ 2d 1647 (1987).

Although Russell et al. teach that the substrate layers are selected from multiple different materials, it is unclear whether the embodiments wherein there are multiple substrates (figs. 3(a-e), 4(c-f); Col. 17, line 40 to Col. 18, line 17) comprise the same or different materials. Therefore, Russell et al. fails to explicitly teach more than one layer of the same resinous material as well as a second resinous layer comprising a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. “optional” language is used) and therefore given no patentable weight. Prior art need not teach the “optional” second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a).

Kawasaki et al., however, teach the use of a multilayered film comprising two layers of polymethyl methacrylate (Col. 4, lines 43-45 and Col. 39, lines 1-4) and a high hardness transparent resin layer (Col. 5, lines 7-10). The film exhibits an impact resistance of greater than 7 kg cm/cm² (Col. 3, lines 53-56). Kawasaki et al. teach the use of the aforementioned resinous structure for the purpose of providing a starting material for a glazing substrate that exhibits

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improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two film types together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability (see Columns 1-3). Thus, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have substituted the base layer of a hard coat laminate substrate with a multilayered resinous film comprising two layers of the same PMM resin and one layer of a second resin for the purpose of providing a base material for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two film types together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability as taught by Kawasaki et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Russell et al. by replacing any of the base films "S" with the multilayered film as taught by Kawasaki et al. in order to provide a starting material for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two adhesives together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability.

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6. Claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al. (#6,391,400) in view of Welhart et al. (#3,810,815).

Russell et al. teach a hard coat laminate film as detailed above. Although Russell et al. teach that the substrate layers are selected from multiple different materials, it is unclear whether the embodiments wherein there are multiple substrates (figs. 3(a-e), 4(c-f); Col. 17, line 40 to Col. 18, line 17) comprise the same or different materials. Therefore, Russell et al. fails to explicitly teach more than one layer of the same resinous material as well as a second resinous layer comprising a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. "optional" language is used) and therefore given no patentable weight. Prior art need not teach the "optional" second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a).

Welhart et al., however, teach the use of a multilayered transparent laminate comprising a polycarbonate resin film layer surrounded by two layers of polymethyl methacrylate resin (Col. 3, lines 17-20). Welhart et al. teach that the polycarbonate layer thickness is modified to withstand the forces applied to the desired end product and explicitly teach that the polycarbonate withstands pressures of greater than 8 psi (Col. 6, lines 40-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it withstands the pressures applied to the desired end product. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it exhibits an impact strength within the Applicant's claimed range (i.e., greater than 10 kg cm/cm²) since it has been held that

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discovering an optimum value of a result effective variable involves only routine skill in the art.

In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Welhart et al. teach the use of the multilayered film for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance (see Columns 1-2). Thus, it would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a single-layered base layer structure of either polycarbonate or polymethyl methacrylate with a multilayered structure comprising two layers of PMM and an intermediate layer of polycarbonate for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance as taught by Welhart et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Russell et al. by replacing the single layered base "S" with a multilayered film of PMM and polycarbonate as taught by Welhart et al. in order to replace the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance.

7. Claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hojnowski (#5,956,175) in view of Kawasaki et al. (#5,393,607) and Onozawa et al. (#6,103,370).

Hojnowski teach a substrate comprising a hard coat film layer provided on one side of a plurality of resin film laminates (see Abstract; Fig. 1). The multilayered based comprises an impact resistant resin film (Fig. 1, #10; Col. 5, lines 44-52) and a second protective polymeric resin layer that is “weatherable” (Fig. 1, #16). The hard coat layer is provided on the protective polymeric resin layer of the multi-layered base (Fig. 1, #18). The polymeric resin film further comprises ultraviolet absorbers (Col. 5, lines 57-58; Col. 6, lines 40-41). The substrate comprises an adhesive layer on the opposite side of the multilayered base than the hard coat film such that the substrate is able to be affixed to surfaces such as window panes or plastic boards for windows (Col. 5, lines 20-23). Note, however, that the claimed limitation, “the hard coat film used for being stuck on the external surfaces...,” is merely an intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Marsham*, 2 USPQ 2d 1647 (1987).

Although Hojnowski does not explicitly state that the hard-coat film layer is silicon-containing, Hojnowski states that, “the scratch and abrasion resistant hard coat (18) may be selected from any of a number of hard coat materials conventionally employed and well known in the window film industry (Col. 6, lines 42-46).” It is notoriously well known in the art to use silicon-containing hard coat films in the window film industry as evidenced by Onozawa et al. (see Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time applicants invention was made to have used a silicone-containing hardcoat film on the substrate detailed by Hojnowski since silicone-containing hardcoat films are notoriously well

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known in the art and exhibit excellent hard coat properties while also exhibiting anti-fouling, anti-bacterial, and anti-glare properties as evidenced by Onozawa et al. (see Abstract).

Hojnowski fails to teach the use of more than one of the same resin layers along with a second resin layer wherein one of the resins is weather-resistant and the other resistant has a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. "optional" language is used) and therefore given no patentable weight. Prior art need not teach the "optional" second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a). Hojnowski also fails to teach a release liner affixed to the adhesive layer.

Kawasaki et al., however, teach the use of a multilayered film comprising two layers of polymethyl methacrylate (Col. 4, lines 43-45 and Col. 39, lines 1-4) and a high hardness transparent resin layer (Col. 5, lines 7-10). The film exhibits an impact resistance of greater than 7 kg cm/cm² (Col. 3, lines 53-56). Kawasaki et al. teach the use of the aforementioned resinous structure for the purpose of providing a starting material for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two film types together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability (see Columns 1-3). Thus, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have substituted the base layer of a hard coat laminate substrate with a multilayered resinous film comprising two layers of the same PMM resin and one layer of a second resin for the purpose of providing a base material

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for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two film types together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability as taught by Kawasaki et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Hojnowski by replacing either of the base films (Fig. 1, #s 10 or 16) with the multilayered film as taught by Kawasaki et al. in order to provide a starting material for a glazing substrate that exhibits improved surface hardness and stiffness over prior art while also eliminating the disadvantageous properties of high impact resins and weather-resistant resins by laminating the two adhesives together to form a multilayered laminate that is capable of exhibiting at least partly high surface hardness, excellent scratch resistance, stiffness, impact resistance, heat resistance, chemical resistance, and weatherability.

Onozawa et al. teach a hard coat sheet laminated to a base wherein the base comprises an adhesive layer and a release liner on the opposite side of the base from the hard coat layer (Col. 3, line 63 to Col. 4, line 2). Onozawa et al. teach the use of a release liner for the purpose of protecting the adhesive surface prior to affixing the substrate to the desired end product (Col. 4, lines 36-38). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicants invention was made to have provided an adhesive layer on the back of a window film substrate with a release liner for the purpose of protecting the adhesive prior to affixing the window film to the desired end product as taught by Onozawa et al.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Hojnowski by providing the adhesive layer with a release liner as taught by Onozawa et al. in order to protect the adhesive prior to affixing the film to the desired end product.

8. Claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hojnowski (#5,956,175) in view of Welhart et al. (#3,810,815) and Onozawa et al. (#6,103,370).

Hojnowski teaches a hard coat laminate as detailed above. Hojnowski fails to teach the use of more than one of the same resin layers along with a second resin layer wherein one of the resins is weather-resistant and the other resistant has a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. “optional” language is used) and therefore given no patentable weight. Prior art need not teach the “optional” second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a). Hojnowski also fails to teach a release liner affixed to the adhesive layer.

Welhart et al., however, teach the use of a multilayered transparent laminate comprising a polycarbonate resin film layer surrounded by two layers of polymethyl methacrylate resin (Col. 3, lines 17-20). Welhart et al. teach that the polycarbonate layer thickness is modified to withstand the forces applied to the desired end product and explicitly teach that the polycarbonate withstands pressures of greater than 8 psi (Col. 6, lines 40-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant’s invention was made to have modified the thickness of the polycarbonate layer such that it withstands the pressures applied to the desired end product. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant’s invention was made to have modified the

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thickness of the polycarbonate layer such that it exhibits an impact strength within the Applicant's claimed range (i.e., greater than 10 kg cm/cm²) since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Welhart et al. teach the use of the multilayered film for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance (see Columns 1-2). Thus, it would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a single-layered base layer structure of either polycarbonate or polymethyl methacrylate with a multilayered structure comprising two layers of PMM and an intermediate layer of polycarbonate for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance as taught by Welhart et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Hojnowski by replacing either or both of layers #10 and #16 (from Fig. 1) with a multilayered film of PMM and polycarbonate as taught by Welhart et al. in order to replace the use of either a weather-resistant or an impact-resistant film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance.

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Onozawa et al. teach a hard coat sheet laminated to a base wherein the base comprises an adhesive layer and a release liner on the opposite side of the base from the hard coat layer (Col. 3, line 63 to Col. 4, line 2). Onozawa et al. teach the use of a release liner for the purpose of protecting the adhesive surface prior to affixing the substrate to the desired end product (Col. 4, lines 36-38). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicants invention was made to have provided an adhesive layer on the back of a window film substrate with a release liner for the purpose of protecting the adhesive prior to affixing the window film to the desired end product as taught by Onozawa et al.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Hojnowski by providing the adhesive layer with a release liner as taught by Onozawa et al. in order to protect the adhesive prior to affixing the film to the desired end product.

Response to Remarks

9. Applicant's arguments with respect to claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 have been considered but are moot in view of the new ground(s) of rejection. Note that pursuant to Applicant's cancellation of claims 2-4, 6-7, 13-15, 17-18, 21-23, and 25-26 in conjunction with the amended claims, the Examiner has withdrawn the 35 U.S.C. 112, first and second paragraph rejections from the previous office action, paper no. 4.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

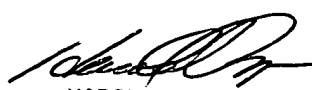
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BPE
February 27, 2003




HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

2/27/03